

A REVIEW OF THE ASIATIC SPECIES OF *CONTIA* IN INDIAN MUSEUMS.

BY

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The identification of many of the Asiatic species of *Contia* has for many years caused me—as it must have done others—considerable perplexity. This is not surprising when one studies the key to these species and the descriptions in Boulenger's Catalogue (Vol. II, pp. 255 *et seq.*). Some of the supposed species are so closely affined that they can only be separated by very minute differences in the relative length and breadth of such shields as the rostral and frontal. When his Catalogue appeared in 1894 Boulenger had seen one specimen of *angusticeps* submitted to him by Mr. Selater from the Indian Museum, which he made the type of a new species under that name. The British Museum Collection contained no specimen of *fasciata*, only one specimen of *persica*, and two of *walteri*. I have for many years had doubts as to the validity of some of these species, and in answer to my appeals I have been able to examine and compare recently all the available specimens of *Contia* in the Indian and Quetta Museums, and the Bombay Natural History collection, thanks to Dr. Annandale, Mr. Bond, and Mr. Spence. In addition to these specimens I have examined many & others. I propose to put these records together in this paper, and it will be seen that there are good grounds for considering *angusticeps* the same as *persica*, *condoni* the same as *deceunlineata*, and that one specimen in the Bombay collection deserves recognition as a species new to science for which I propose the name *zebrina*.

I have examined minutely the specimens referred to above, and append below descriptions and synopses showing the details of the lepidosis.

*CONTIA PERSICA* (Anderson).

*Cyclophis persicus*.—Anderson, P.Z.S., 1872, p. 392. Blanford, Zool. E. Persia, 1876, p. 408.

*Pseudocyclophis persicus*.—Boettger, Zool. Jahrb., 1888. III, p. 922.

*Contia persica*.—Boulenger, Cat. Vol. II, 1894, p. 263. Ingoldby, Bomb. N. H. Journ., Vol. XXIX, p. 129. Wall, Bomb. N. H. Journ., Vol. XVIII, p. 801.

*Contia angusticeps*.—Annandale, Vol. XVIII, p. 801. J.A.S. Bengal, 1904, p. 208. Boulenger, Cat. Vol. II, 1894, p. 262. Ingoldby, Bomb. N. H. Journ., Vol. XXIX, p. 129. McMahon, Bomb. N. H. Journ., Vol. XIV, p. 181. Wall, Bomb. N. H. Journ. Vol. XVIII, p. 501.

*Contia walteri*.—Wall, Bomb. N. H. Journ., Vol. XX, p. 1037.

*Length*.—345 mm. ( $13\frac{3}{8}$  inches), tail 78 mm. ( $3\frac{1}{8}$  inches).

*Lepidosis*.—(a) *Typical*. *Rostral*. Depth from three-fifths to two-thirds its breadth. Portion visible above from two-thirds to a shade less than the suture between the internasals. *Internasals*. The suture between the fellows subequal to that between the praefrontal fellows. *Praefrontals*. The suture between the fellows from one quarter to two-fifths the length of the frontal. *Supraoculars*. Length from two-thirds to four-fifths the length of the frontal, half the parietals; breadth from half to two-thirds that of the frontal. *Frontals*. Length equal to or rather greater than its distance to the end of the snout, three-fifths to two-thirds that of the parietals. *Loreal*. Absent, the praefrontal touching the 2nd labial. *Praeocular*. One. *Postocular*. One. *Temporals*, 1+1. *Supralabials*. 7; the 1st and 2nd touching the nasals, 3rd and 4th the eye, and the 5th and 6th the anterior temporal. *Sublinguals*. Posterior shorter than the anterior; in contact with the 4th and 5th, or only the 5th infralabials. *Infralabials*. 5, the 5th touching two scales behind. *Costals*.

Two heads-lengths behind the head 15, midbody 15, two heads-lengths before the vent 15 or 13. When the rows reduce from 15 to 13 the 3rd and 4th rows above the ventrals blend. Smooth. With single apical pits. *Ventrals* 185 to 214. From 6 to 8 pairs of scales intervene between the 1st ventral and the posterior sublinguals. *Anal.* Divided. *Subcaudals.* 63 to 82. Divided.

(b) *Anomalies.* *Loreal.* A very small shield rarely present. *Posterior sublinguals.* Rarely separated by one scale. *Costals.* Rarely the 4th row above the ventrals divides, the resultant rows blend, and the redivision and blending may be repeated making the rows 17 in places.

*Colouration.*—Dorsally the scales are a pale brown or dun with buff margins. This is most marked in the anterior part of the body, the colour becoming uniform buff posteriorly. In some specimens there are a few black spots behind the neck arranged quincuncially, or confluent to form cross bars. Belly unspotted. Head with three black cross-bars which may be completely confluent. The anterior passes between the eyes, and reappears below the eye on the upper parts of the 3rd or 3rd and 4th supralabials. The median passes over the middle of the parietals and extends to the upper parts of the 5th, 6th and 7th supralabials. The posterior lies just behind the parietals, and involves 4 or 5 rows of scales behind, extending to the sides of the neck. In spirit the black often fades considerably.

*Sexes.*—The male genitalia are cylindrical organs, not bifid, and are beset with numerous very small recurved spines.

*Distribution.*—Persia. Baluchistan. Waziristan. N.W. Frontier (Malakand. Parachinar). W. Himalayas (Murree).\*

NOTE.—I think it probable that the specimen labelled *walteri* in the British Museum from Kohistan, Sind, will prove to be this species.

#### CONTIA FASCIATA (Jan.).

*Length.*—358 mm. (14 $\frac{3}{8}$  inches), tail 54 mm. (2 $\frac{1}{8}$  inches).

*Lepidosis.*—(a) *Typical.* *Rostral.* Depth about two-thirds its breadth. Portion visible above twice or nearly twice the length of the suture between the internasal fellows. *Internasals.* The suture between the fellows half to three-fourths that between the praefrontal fellows. *Praefrontals.* The suture between the fellows one-third to two-fifths the length of the frontal. *Supraoculars.* Length equal to or a shade less than the length of the frontal, three-fifths to four-fifths the parietals. Breadth equal to that of the frontal. *Frontal.* Length greater than its distance to the end of the snout, two-thirds to four-fifths the parietals. *Nasal.* Entire. *Loreal.* One, one-third to two-fifths the length of the nasal. *Praeocular.* One. *Postoculars.* Two. *Temporals.* 1+1. *Supralabials.* 7; the 1st and 2nd touching the nasals, the 3rd and 4th the eye, 5th and 6th the anterior temporal. *Sublinguals.* The posterior about three-fourths the length of the anterior, separated by one scale; in contact with the 4th and 5th infra-labials. *Infralabials.* 5, the 5th in contact with three scales behind. *Costals.* Two heads-lengths behind the head 15, midbody 15, two heads-lengths before the vent 13. The rows reduce from 15 to 13 four to six heads-lengths before the vent by the fusion of the 3rd and 4th rows above the ventrals. Smooth. With single apical pits which are extremely difficult to detect in spirit specimens. *Ventrals.* 126 to 157 (158 to 171 Boulenger). From 4 to 6 pairs of scales between the 1st ventral and the posterior sublinguals. *Anal.* Divided. *Subcaudals.* 39 to 49; divided (48 to 62 Boulenger).

(b) *Anomalies.* *Supralabials.* The 5th is divided in one specimen on one side forming a spurious lower anterior temporal. The 3rd and 4th are confluent on one side in one specimen and the 6th and 7th confluent on both sides

\* This specimen used to be in the Bombay collection but is now missing.

on the same specimen, and the 6th and 7th confluent on one side in another *Posterior sublinguals*. In contact in one specimen. *Subcaudals*. In one specimen the 3rd to the 7th are subdivided making four shields across the tail. In another the 2nd is entire.

*Dentition*.—I have no skull but I have a note saying that “the *maxillary* teeth are dubiously 11, the *palatopterygoid* series dubiously 22, and the *mandibular* dubiously 11.”

*Colouration*.—Dorsally buff to pale brown with from 33 to 40 blackish bars on the body, and 11 to 16 on the tail. These extend to the edge of the ventrals. A series of dark spots on the edge of the ventrals and last row of costals alternate with the bars. Belly unspotted, or with a scanty dusky mottling or suffusion mesially from the throat extending slightly backwards. Head in well marked examples with a dusky suffusion on the top involving the frontal, the inner two-thirds of the supraocular and inner two-thirds of the parietal shields, extending below the eye to the upper parts of the 3rd and 4th supralabials. A nuchal bar involves four to five rows of scales in the length of the snake and extends round the sides of the neck but is not complete across the throat.

*Breeding*.—A female 358 mm. (14½ inches) in length contained five eggs in the oviducts, of such a size and character as to suggest that this species is oviparous.

*Distribution*.—*Palestine*. (Shellal, Wadiguzzi and Deir-el-Belah). *Iraq*. (Shai-ba, Faluja). *S. Persia*. (Maidan Mihaftan).

#### *CONTIA* MCMAHONI Wall.

*C. mcmahani*.—Wall, Bomb. N. H. Jourl., Vol. XX, p. 1038.

*Length*.—311 mm. (1 foot and ¼ of an inch), tail 84 mm. (3⅓ inches).

*Lepidosis*. *Rostral*. Depth two-thirds to three-fourths its breadth. Portion visible above two-thirds the suture between the internasal fellows. *Internasals*. The suture between the fellows equal to or a shade greater than that between the praefrontal fellows. *Praefrontals*. The suture between the fellows one-third to one-fourth the length of the frontal. *Supraoculars*. Length three-fourths to four-fifths the length of the frontal, half to three-fifths the parietals. Breadth about half that of the frontal. *Frontal*. Length rather greater than its distance to the end of the snout, three-fifths to three-fourths the parietals. *Nasal*. Entire. *Loreal*. None. *Praeocular*. One. *Postocular*. One. *Temporals* 1+1. *Supralabials*. 7, 1st and 2nd touching the nasal, 3rd and 4th the eye, 5th and 6th the anterior temporal. *Sublinguals*. The posterior about three-fourths the anterior; in contact or separated by one scale; touching the 4th and 5th infralabials. *Infralabials*. 5, the 5th touching two scales behind. *Costals*. Two heads-lengths behind the head 13, midbody 15, two heads-lengths before the vent 13. The increase from 13 to 15 occurs about four heads-lengths behind the head, and is due to the 3rd or 4th row above the ventrals dividing. The decrease from 15 to 13 occurs about eight heads-lengths before the vent, where the 3rd and 4th rows above the ventrals blend. Smooth. With single apical pits. *Ventrals*. 204 to 212. From 6 to 8 pairs intervene between the first ventral, and the posterior sublinguals. *Anal*. Divided. *Subcaudals*. 91 to 96; divided.

*Colouration*.—Dorsally the scales are pale brown centrally with buff margins. The brown is darker in the anterior part of the body than posteriorly. A few obscure blackish spots on the neck in some specimens. Belly unspotted. Head blackish or dusky, the black extending for about four rows in the length of the snake behind the parietals, and laterally to the temporals and upper parts of the 5th, 6th and 7th, or 6th and 7th supralabials.

*Distribution*.—Baluchistan (Loralai, Spitangi. Mach, Quetta).

## CONTIA COLLARIS (Menetries).

*Length*.—340 mm. ( $13\frac{3}{8}$  inches), tail 62 mm. ( $2\frac{1}{2}$  inches).

*Lepidosis*.—(a) *Typical*. *Rostral*. Depth two-thirds to three-fourths its breadth. Portion visible above equal to or less than the suture between the internasal fellows. *Internasals*. Suture between the fellows equal to or a little shorter than that between the praefrontal fellows. *Praefrontals*. The suture between the fellows one-third to two-fifths the length of the frontal. *Supraoculars*. Length a little shorter than the frontal, three-fifths the parietals. Breadth half to three-fourths that of the frontal. *Frontal*. Length rather greater than its distance to the end of the snout; two-thirds to three-fourths the parietals. *Nasal*. Entire. *Loreal*. Small, about one-third the length of the nasal (sometimes absent). *Praeocular*. One. *Postocular*. One. *Temporals*. 1+1 or 1+2. *Supralabials*. 7; the 1st and 2nd touching the nasals, 3rd and 4th the eye, and the 5th and 6th the anterior temporals. *Sublinguals*. The posterior rather shorter than the anterior, in contact with one another, touching the 4th and 5th infralabials. *Infralabials*. 5, the 5th touching two scales behind. *Costals*. Two heads-lengths behind the head 15, midbody 15, two heads-lengths before the vent 15 or 13. Smooth. With single apical pits. *Ventrals*. 157 to 189 (150 to 191 Boulenger). 4 to 6 pairs of scales between the 1st ventral and the posterior sublinguals. *Anal*. Divided. *Subcaudals*. 54 to 62, divided. (50 to 78 Boulenger).

(b) *Anomalies*. *Subcaudals*. The 2nd to 6th are entire in one specimen. *Dentition*.—Maxillary 17; anodont, isodont. *Palatine*. 9 to 10; anodont, isodont. *Pterygoid*. 19 to 20, anodont, isodont. *Mandibular*. 16; anodont, isodont.

*Vertebrae*. Neural spines about one-fourth the depth of the body; Hypapophyses well developed in anterior vertebrae ceasing in the second eighth of the body of the snake. Bifid in the first caudal and succeeding vertebrae.

*Costae*. The first articulated to the 3rd vertebra. Well developed, as long as the second. Last bifid, the outer ramus very short. First two caudal vertebrae with bifid pseudo-costal processes.

*Colouration*.—Dorsally uniform buff or pale brown. Belly unspotted. Head black above, involving the posterior part of the internasals or praefrontals and the anterior two-thirds to three-fourths of the parietals. Laterally the black extends to the edge of the parietals and involves the upper part of the 3rd and 4th supralabials. In the Muscat specimen the whole of the 2nd, 3rd and 4th supralabials are black and the outer part of the sublinguals and 1st infralabials, and all of the 2nd to 5th infralabials. A black nuchal bar involving four to five rows in the length of the snake, begins just behind the parietals and extends laterally to below the throat where it is incomplete mesially.

*Distribution*.—Grecian Archipelago. Cyprus. Asia Minor to Caucasus. Arabia (Muscat). Iraq Baghdad. Persia.

## CONTIA ZEBRINA spec. nov.

*Length*.—475 mm; ( $18\frac{3}{4}$  inches) tail 125 mm. (5 inches).

*Lepidosis*.—*Rostral*. Depth two-thirds its breadth, portion visible above about two-thirds the suture between the internasal fellows. *Internasals*. The suture between the fellows equal to that between the praefrontal fellows. *Praefrontals*. The sutures between the fellows half the length of the frontal. *Supraoculars*. Length three-fourths the frontal, half the parietals; breadth three-fifths that of the frontal. *Frontal*. Length a shade longer than its distance to the end of the snout, two-thirds the parietals. *Nasal*. Entire. *Loreal*. None. *Praeocular*. One. *Postocular*. One. *Temporals*. 1+2. *Supralabials*. 7, the 1st and 2nd touching the nasal, 3rd and 4th the eye, 5th and 6th the anterior temporal. *Sublinguals*. The posterior about three-fourths the length

of the anterior; in contact with one another; touching the 4th and 5th infralabials. *Infralabials*. Five, the 5th touching two scales behind. *Costals*. Two heads-lengths behind the head 15, midbody 15, two heads-lengths before the vent 13. The rows reduce from 15 to 13 about five heads-lengths before the vent by the blending of the 4th and 5th rows above the ventrals. Smooth. With single apical pits. *Ventrals*. 225. 7 pairs of scales between the 1st ventral and the posterior sublinguals. *Anal*. Divided. *Subcaudals*. 110; divided.

*Colouration*.—Dorsally tawny with many close-set, blackish, linear cross bars, about sixty-eight in the anterior half of the body. The first bar is on the 5th row behind the parietals. The bars extend to the edges of the ventrals and gradually fade till the posterior part of the body is uniform buff. On close examination the bases and centres of the scales are a pale dun, and the edges buff. The belly is unspotted. The head is uniform except for a blackish mark on the upper halves of the 3rd and 4th supralabials. There is no nuchal bar.

*Distribution*.—Bazdad, South Persia. The type is in the Bombay collection (No. 171-1).

CONTIA CORONELLA (Schlegel).

*Length*.—106 mm. ( $4\frac{1}{2}$  inches).

*Lepidosis*. *Rostral*. Depth about two-thirds its breadth. Portion visible above rather greater than the suture between the internasal fellows. *Internasals*. The suture between the fellows rather less than that between the prefrontal fellows. *Praefrontals*. The suture between the fellows one-fourth the length of the frontal. *Supraoculars*. Length three-fourths that of the frontal three-fifths the parietals; breadth one half that of the frontal. *Frontal*. Length about twice its distance to the end of the snout, a shade greater than the parietals. *Nasal*. Entire. *Loreal*. One; small, about two-fifths the length of the nasal. *Praeocular*. One. *Postoculars*. Two. *Temporals*. 1+2. *Supralabials*. Seven, the 1st and 2nd touching the nasal, 3rd and 4th the eye, and 5th and 6th the anterior temporal. *Sublinguals*. Posterior subequal to the anterior; separated by 2+1 scales; touching the 4th and 5th infralabials. *Infralabials*. 5; the 5th touching 3 scales behind. *Costals*. Two heads-lengths behind the head 17, midbody 17, two heads-lengths before the vent 15. The rows reduce from 17 to 15 about six heads-lengths before the vent by the blending of the 3rd and 4th rows above the ventrals. Smooth. With single apical pits. *Ventrals*. 142. (103 to 148 Boulenger) Divided. *Subcaudals*. 33, divided (24 to 52 Boulenger) 2 pairs of scales between the 1st ventral and the posterior sublinguals. *Anal*. Divided.

*Colouration*. Dorsally pale dun with ten series of deep brown spots arranged quincuncially. Belly with four series of round, brown spots arranged two on each ventral, the outer of one side and the inner of the opposite. Head with a brown bar between the eyes, reappearing below the eye and involving the posterior part of the second, the whole of the 3rd and the anterior part of the 4th supralabials. A dark speck on the 3rd infralabials. A black nuchal bar involving 5 scales in the length of the snake, separated except mesially from the parietals by two rows of scales. This is complete right round the throat.

*Distribution*.—Shellal, Wadi Guzzi, Palestine. (No. 19428 in the Indian Museum.)

CONTIA DECEMLINEATA (Dumeril and Bibron).

*C. decemlineata*.—Boulenger, Cat., Vol. II, p. 260.

*Contia condoni*.—Boulenger, Bomb. N. H. J., Vol. XXVI, p. 1024.

*Length*. 498 mm. ( $19\frac{3}{4}$  inches), tail 128 mm. ( $5\frac{1}{2}$  inches).

*Lepidosis*. (a) *Typical Rostral*. Depth about three-fourths its breadth. *Internasals*. The suture between the fellows from half, to equal to that between the praefrontal fellows. *Praefrontals*. The suture between the fellows two-fifths to three-fifths the length of the frontal. *Supraoculars*. Length equal to or a little shorter than the frontal, three-fifths to two-thirds the parietals; breadth three-fourths to four-fifths that of the frontal. *Frontal*. Length equal to or a shade greater than its distance to the end of the snout, two-thirds to four-fifths the parietals. *Nasal*. Entire. *Loreal*. One. *Postoculars*. Two. *Temporals*. 1+2. *Supralabials*. 7; the 1st and 2nd touching the nasal, 3rd and 4th the eye, 5th and 6th the anterior temporal. *Sublinguals*. Posterior a little shorter than the anterior, in contact with one another, touching the 4th and 5th infralabials. *Infralabials*. Five, the 5th touching two scales behind. *Costals*. Two heads-lengths behind the head 17, midbody 17, two heads-lengths before the vent 15. The reduction from 17 to 15 is caused by the 3rd and 4th rows above the ventrals blending six to eight heads-lengths before the vent. Smooth. With single apical pits. *Ventrals*. 150 to 174. (152 to 175 Boulenger). 3 to 6 pairs of scales between the first ventral and the posterior sublinguals—*Anal*. Divided. *Subcaudals*. 69 to 92; divided (64 to 85 Boulenger).

(b) *Anomalies*. *Postoculars*. In specimen No. 6 the upper postocular is confluent with the supraocular on both sides. *Supralabials*. The 3rd is divided in one specimen on one side, making the series total 8, the 4th and 5th touching the eye. *Posterior sublinguals*. Sometimes separated by a scale. *Infralabials*. The 5th is sometimes in contact with 3 scales behind.

*Colouration*.—Dorsally buff with oblong blackish spots arranged quincuncially. A series of single spots on the edge of the ventrals, a series of dual spots on the edges of the 2nd and 3rd, and 3rd and 4th rows and a series of triple spots on the edges of the 5th and 6th, 6th and 7th, and 7th and 8th rows (sometimes also the 8th and 9th). These tend to become dotted longitudinal lines posteriorly. Belly unspotted. Head with no black bars. No nuchal bar. Upper supralabials with dusky sutures especially evident between the 3rd and 4th, and 5th and 6th shields (sometimes in all).

*Breeding*.—A specimen 482 mm. (19 inches) in length contained three eggs in the oviducts, of such a size and character as to suggest that the species is oviparous.

*Distribution*.—Persia.